UNITED STATES PATENT AND TRADEMARK OFFICE

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10/567,717	02/08/2006	Louis Robert Litwin	PU030177	4024

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EXAMINER
NGUYEN, QUANG N

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 March 2008*.
2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12 and 14-21* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-12 and 14-21* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☐ All   b)☐ Some *   c)☐ None of:
      1.☐ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

Detailed Action

1.   This Office Action is responsive to the Amendment filed on 03/14/2008. Claim 9 has been amended. Claim 13 has been canceled. Claims 1-12 and 14-21 are pending for examination.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   **Claims 1-4, 6-7, 9-12 and 15-21 are rejected under 35 U.S.C. 102(e) as being unpatentable by Hsu (2004/0205158 A1), in view of Applicant's Admitted Prior Art (AAPA).**

4.   As to claim 1, **Hsu** teaches a method, comprising:

scanning, by a wireless local area network scanner in a wireless device, to detect the presence of a wireless local area network WLAN *(i.e., the Mobile Station MS tunes to WLAN frequencies and actively or passively scans for the WLAN beacon, using a WLAN tuner)* **(Hsu, paragraphs [0064] and [0078-0080])**;

detecting the presence of said wireless local area network by employing said wireless local area network scanner to identify energy fluctuations **(Hsu, paragraphs [0043], [0061] and [0064])**;

contacting a base station of said wireless local area network by the wireless local area network baseband circuit in said wireless device in response to detection of said wireless local area network to request location of said base station *(upon receipt of the WLAN request from the MS, the Base Station BS may transmit the information such as location identification for the WLAN)* **(Hsu, paragraphs [0046], [0050] and [0052])**; and

receiving location of said wireless local area network *(the base station BS transmits location information identifies the Access Points APs supporting the WLAN)* **(Hsu, paragraphs [0046], [0050] and [0052])**.

Hsu does not explicitly teach identifying energy fluctuations without a wireless local area network baseband circuit being activated to process data.

However, as well-known to one of ordinary skill in the art, Applicant's Admitted Prior Art **(AAPA)** teaches that **the frequency reference accuracy specified in WLAN standards** (e.g., $\pm$25 ppm as specified in the IEEE 802.11b standard) **can allow the phase-locked loop (PLL) circuit to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry** and as such, the WLAN baseband circuitry does not have to be activated to detect the presence of the WLAN, thereby conserving power and saving battery life in the mobile device **(AAPA, page 10, lines 15-18)**.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the frequency reference as specified in the IEEE 802.11 standards to allow the PLL circuit to operate without AFC provided by the WLAN baseband circuitry, as disclosed by the **AAPA**, into the teachings of **Hsu**. One would be motivated to do so to conserve power and to save battery life in the mobile device.

5. As to claim 2, **Hsu-AAPA** teaches the method of claim 1, further comprising logging, on said wireless device, said location of said base station for future reference **(Hsu, paragraphs [0076] and [0083])**.

6. As to claim 3, **Hsu-AAPA** teaches the method of claim 1, wherein said location comprises a map coordinate location of said base station **(Hsu, paragraph [0052])**.

7. As to claim 4, **Hsu-AAPA** teaches the method of claim 1, wherein said location comprises one of a street address and longitude/latitude coordinates for said base station **(Hsu, paragraph [0052])**.

8. As to claim 6, **Hsu-AAPA** teaches method of claim 2, wherein said logging of said location is one of automated logging and a manual logging **(Hsu, paragraphs [0027] and [0030])**.

9.   As to claim 7, **Hsu-AAPA** teaches the method of claim 1, wherein said location

comprises global position coordinates **(Hsu, paragraph [0052])**.

10.   Claims 9-12 are corresponding wireless device claims of method claims 1, 3-4

and 7; therefore, they are rejected under the same rationale.

11.   As to claim 15, **Hsu-AAPA** teaches the wireless device of claim 9, further

comprising the step of displaying a location of a base station of a wireless local area

network logged previously that is near said wireless device *(i.e., the display may provide*

the AP location in the context of a local map in a graphical manner or as a textual

message) **(Hsu, paragraph [0052])**.

12.   Claims 16-20 are corresponding mobile device claims of method claims 1-4 and

7; therefore, they are rejected under the same rationale.

13.   Claim 21 is a corresponding mobile device claim of wireless device claim 15;

therefore, it is rejected under the same rationale.

14.   **Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu-**

AAPA, and further in view of Rao (US 2004/0264395 A1).

15.   As to claim 5, **Hsu-AAPA** teaches the method of claim 1, but does not explicitly

teach comparing a MAC address of said base station to a database of known locations

of base stations or wireless local area networks and not requesting a location if the

contacted said base station is already in said database.

In the same field of endeavor, **Rao** teaches a wireless network client 2 scans the

network for discovering wireless access points, creates and stores a list of detected

wireless access points containing entries for each discovered wireless local network

identifier such as SSID in an 802.11 environment, the MAC address and the signal-to-

noise ratio of the corresponding detected wireless access point **(Rao, paragraphs

[0010] and [0052-0053])**.

Therefore, it would have been obvious to one having ordinary skill in the art at

the time the invention was made to incorporate the feature of adding discovered

wireless access points information to a client database, as disclosed by **Rao**, into the

teachings of **Hsu-AAPA**.   One would be motivated to do so to provide automatic

configuration of wireless network client in a wireless local area network environment

without the need for user intervention, i.e., automatically obtaining the network identifier

and other network related information for the local wireless access point in order to

select the best available wireless local area network for accessing **(Rao, paragraph

[0058])**.

16.   **Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hsu-AAPA, and further in view of Sundar et al. (US 2003/0134650 A1), hereinafter "Sundar".**

17.   As to claim 8, **Hsu-AAPA** teaches the method of claim 1, but does not explicitly teach detecting signature sequences from a wireless local area network.

In an analogous art, **Sundar** teaches detecting signature sequences from a wireless local area network *(a mobile station 310 may initiate a detection 402 of RF energy in the relevant spectrum from a wireless local area network)* **(Sundar, paragraphs [0055-0058])**.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the features of detecting signature sequences *(i.e., RF energy)* from a wireless local area network, as disclosed by **Sundar**, into the teachings of **Hsu-AAPA**. One would be motivated to do so to detect the presence of a WLAN by detecting the RF energy in the permitted 802.11a/b/g spectrum **(Sundar, paragraph [0055])**.

18.   Claim 14 is a corresponding wireless device claim of method claim 8; therefore, it is rejected under the same rationale.

Response to Arguments

19.   In the Remarks, Applicants argued in substance that

(A)   **Hsu** in view of **AAPA** (Applicant Admitted Prior Art) does not render claim 1 obvious because *"The frequency reference accuracy specified in WLAN standards (e.g., $^{\pm}25$ ppm as specified in the IEEE 802.11b standard) can allow the phase-locked loop (PLL) circuit to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry"*, as recited in page 10, lines 15-18, of the specification, can not be considered as **AAPA**.

As to point **(A)**, Examiner respectfully disagrees noting that by reading *"The frequency reference accuracy specified in WLAN standards (e.g., $^{\pm}25$ ppm as specified in the IEEE 802.11b standard) can allow the phase-locked loop (PLL) circuit to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry"*, as recited in page 10, lines 15-18, of the specification, one ordinary skill in the art would readily recognized that the Applicants admitted/agreed that "The frequency reference accuracy specified in WLAN standards *(e.g., $^{\pm}25$ ppm as specified in the IEEE 802.11b standard)*" can allow the phase-locked loop (PLL) to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry".

Additionally, in order to support that "The frequency reference accuracy specified in WLAN standards *(e.g., ±25 ppm as specified in the IEEE 802.11b standard)*" can allow the phase-locked loop (PLL) to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry", as admitted by AAPA (page 10, lines 15-18, of the specification), is well-known to one ordinary skill in the art, Examiner respectfully submits that **"Clock Solutions for WiFi (IEEE 802.11)" by Brandon Ogilvie** *(cited here as a supportive reference)* teaches that both client and AP (Access Point) designs incorporate a RF transceiver and a baseband/MAC that operate with a common reference clock (REFCLK) input and the typical performance requirement is **±25 ppm all-inclusive frequency stability** *(see page 2, last paragraph)*. Client NICs are often designed to incorporate a low power "sleep" mode to conserve battery power. During sleep mode, a continuous reference clock signal for the RF transceiver and baseband/MAC is not necessary; **a crystal clock oscillator with low-power stand-by function is recommended** *(see page 3, first paragraph)*. **Brandon Ogilvie** also teaches some designs for client NICs may use an industry-standard 32.768 kHz crystal for low-power "sleep" mode to conserve battery power and **while in sleep mode, most functions of the baseband/MAC and RF IC are shutdown. Meanwhile, the 32.768 kHz crystal remains active and the baseband/MAC will continue to receive and process the 32.768 kHz signal and use this to establish wake-up intervals** (i.e., to identify energy fluctuations without a wireless baseband circuit being activated to process data) *(see page 3, Application: Sleep Mode REFCLK)*.

Furthermore, in order to support that "The frequency reference accuracy specified in WLAN standards *(e.g., $^{\pm}25$ ppm as specified in the IEEE 802.11b standard)*" can allow the phase-locked loop (PLL) to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry", as admitted by AAPA, is well-known to one ordinary skill in the art, Examiner respectfully submits that **"Power Efficient Channel Scheduling In a Wireless Network" by Bah et al. (US 7,110,783)** *(cited in PTO-892 with the last Office Action as supportive reference)* teaches that the messages passed between the low power transceiver 100 and 102 and host transceiver 212 are transmitted over the lower power, low bandwidth, control channel, and not a primary communication channel (e.g., an 802.11 channel) **the standard high power NIC cards of the wireless computing devices 220 and 222 need not be used for facilitating the presence detection and registration process, resulting in less power usage by the devices** (i.e., to identify energy fluctuations without a wireless baseband circuit being activated to process data) **(Bah et al, col. 7, line 64 – col. 9, line 33)**.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Hence, **Hsu** in view of **AAPA** (Applicant Admitted Prior Art) does render claim 1 obvious because *"The frequency reference accuracy specified in WLAN standards (e.g., $\pm$25 ppm as specified in the IEEE 802.11b standard)* **can allow the phase-locked loop (PLL) circuit to operate without automatic frequency control (AFC) provided by the WLAN baseband circuitry***"*, can reasonably be considered as **AAPA**.

Conclusion

20.   Applicant's arguments as well as request for reconsideration filed on 03/14/2008 have been fully considered but they are not deemed to be persuasive.

21.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22.   Further references of interest are cited on Form PTO-892, which is an attachment to this Office Action.

23.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang N. Nguyen whose telephone number is (571) 272-3886.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's SPE, Rupal Dharia, can be reached at (571) 272-3880. The fax phone number for the organization is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.   Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quang N. Nguyen/
Primary Examiner, Art Unit 2141